

DRAFT FOR PUBLIC RELEASE

SMART MOBILITY ROADMAP 2017

AUSTIN'S APPROACH TO SHARED, ELECTRIC,
AND AUTONOMOUS VEHICLE TECHNOLOGIES

Austin, Texas



City of Austin



and

Capital
Metropolitan
Transportation
Authority



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Smart Mobility Roadmap



Affordability

Congestion

**Accessibility:
Seniors, Disabled,
etc.**

**Shared Mobility:
Heavy Adoption**

On-Demand Mobility

**GHG Emissions: Net
Zero by 2050**

**Develop a
nation-leading
plan on
Shared, Electric and
Autonomous Vehicles and Services**

**City Council and
Capital Metro
Board Resolutions:
(May and March
2017)**

Smart Mobility Inspiration

IMAGINEAUSTON
Vibrant. Livable. Connected.



Connections
2025



Technology Doesn't Change Geometry

TODAY



40 human-driven cars

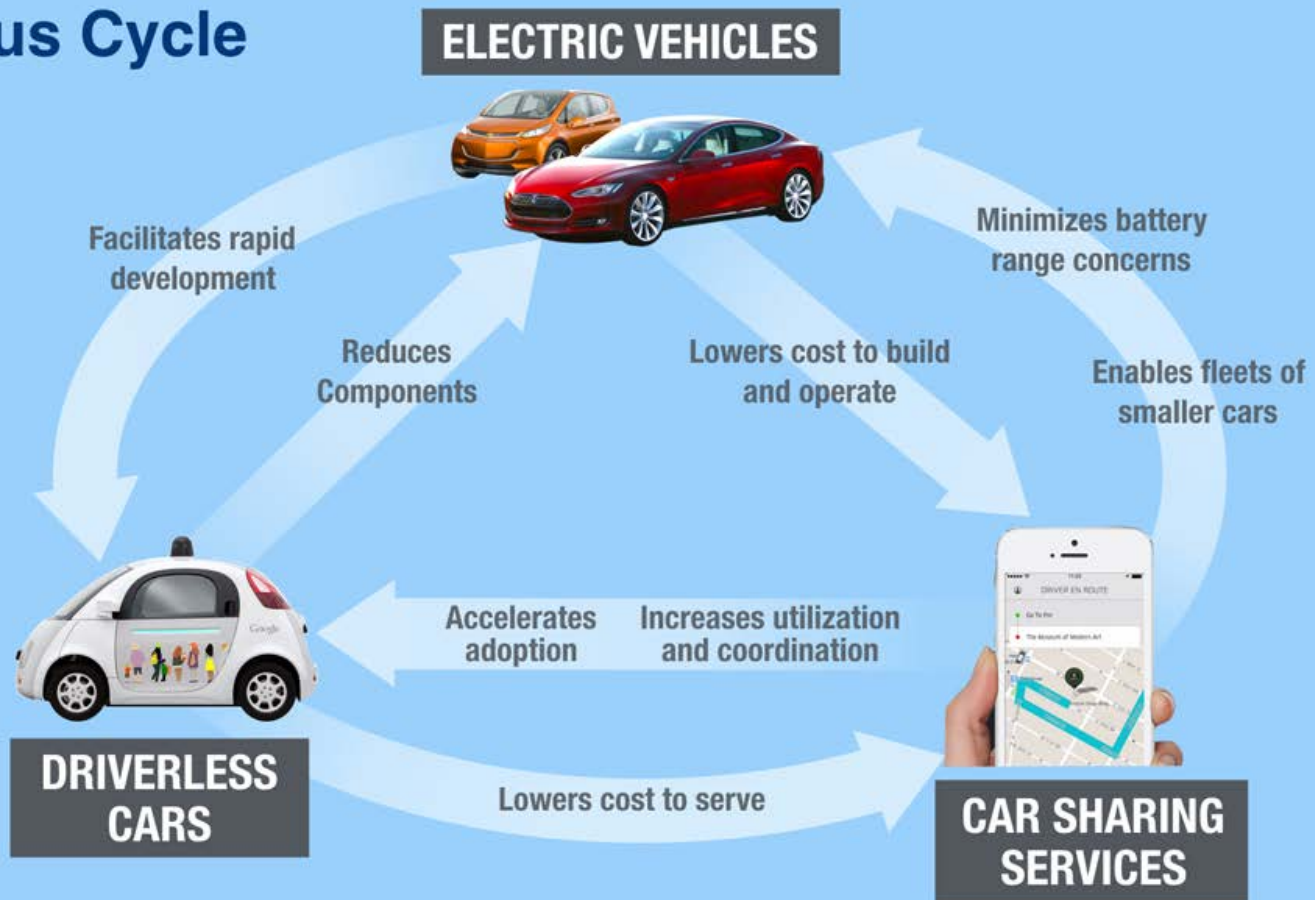
TOMORROW



40 self-driving cars

Convergence of Technologies

A Virtuous Cycle



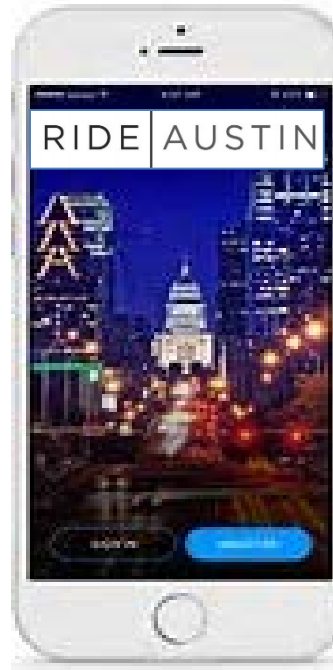
Next Steps:

- Encourage less SOVs with easy/affordable alternatives;
- More data and collaboration

Shared Mobility



Shared Mobility



“When deployed alongside fixed-route mass transit networks, shared-ride AV taxis could all but eliminate the convenience advantage of personal autos.”

Next Steps:

- Create an Austin Shared Use Mobility Plan
- Promote shared vehicle services

— Bloomberg Philanthropies-
Aspen Institute

Electric Vehicles



- 618 Level 1 EV charging ports
- 180 locations
- 4,000+ area EV vehicles

Steep Climb:

- .4% of 1M vehicles today
- 25% = 250,000 vehicles

EV's = lower GHG + cost + energy use

Electric Vehicles Next Steps

Fleets: early EV adopters,
Lower Operating costs by 2020

Personal EVs:
total costs meets gas-powered cars by 2025

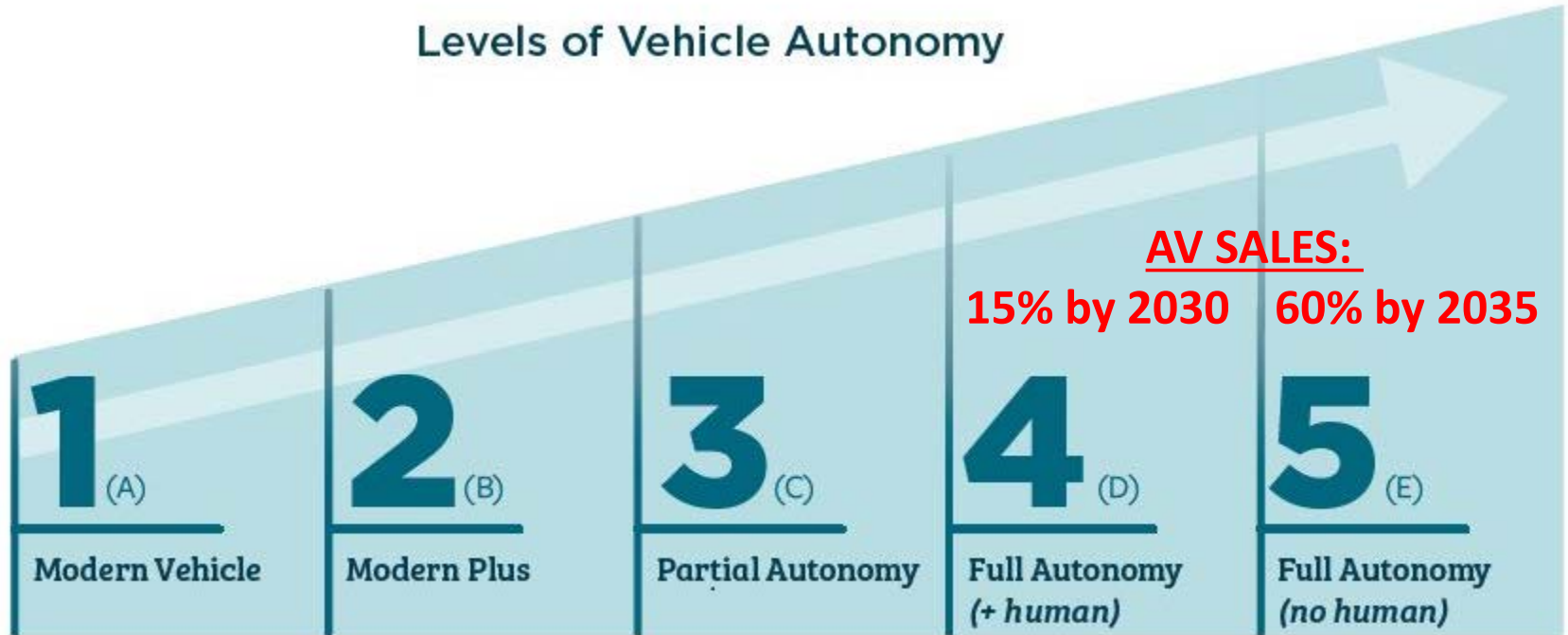


Next Steps:

- Fleets conversion; Low-to-moderate income programs
- Grid Integration; Fast Charging

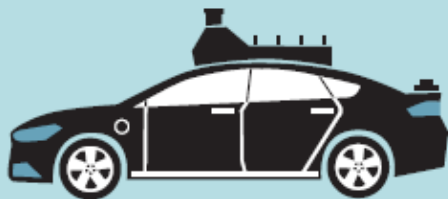
Autonomous Vehicles

Levels of Vehicle Autonomy



Graphic recreated, with permission, from "Future Autonomous Vehicle Driver Study," September 2016, Cox Automotive.

Taxibot



Deliverybot



Driverless Shuttle



Software Train



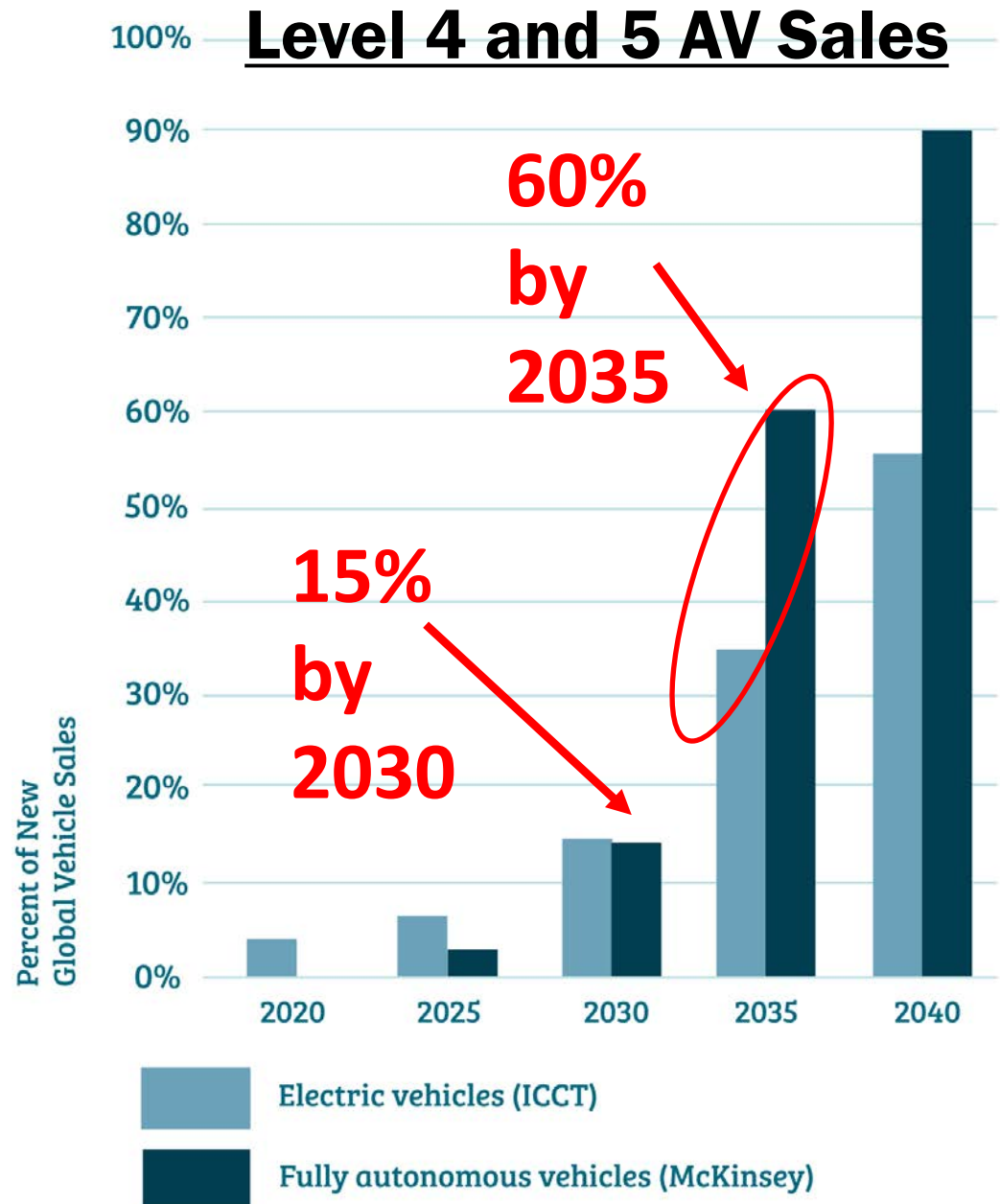
Autonomous Vehicles

 Gap between EV and AV adoption

Next Step:

- Develop a Master Plan for emerging E-AV technologies and services to pursue, keep it human centered

Projections of Electric and Fully Autonomous Vehicle Sales



Impacts on Equity

On-demand AVs can help non-drivers, the elderly and disabled, along with better sidewalks

More pilots with pricing incentives are needed



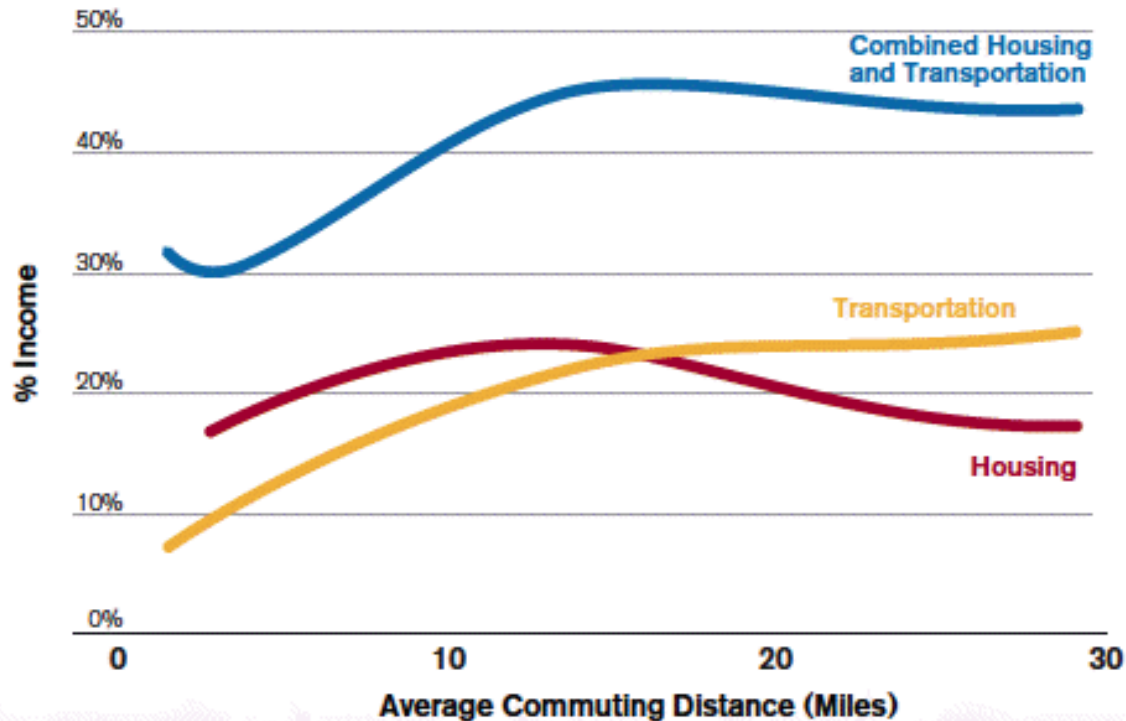
Current Pilots

Capital Metro piloting “PickUp” on-demand service in East Austin

Community Care + Ride Austin piloting free transport to health care

Impacts on Affordability

Housing and Transportation Cost Burdens by Commute

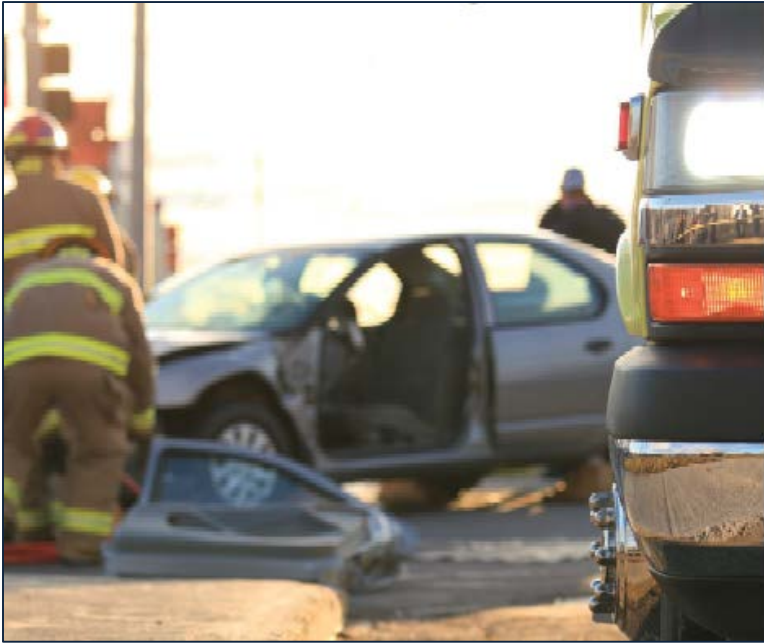


Source: Center for Neighborhood Technology.

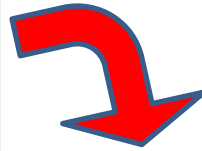
Study: Costs saved on housing 12+ miles from jobs/city center is wiped out by transportation costs Housing and Affordability Index.

Shared Mobility – car-pool/vanpool, coupled with driverless vehicles to reach transit can extend transportation access, reduce cost

Impacts on Safety



Today: 94% of crashes caused by human error



Future: 80% of crashes can be reduced through automation



Impacts on Workforce



Potential jobs lost:
~3% of Austin jobs are
drivers

- 77% delivery/
heavy truck drivers
- 14% bus drivers
- 8% taxi/chauffeur
drivers

Next Step:

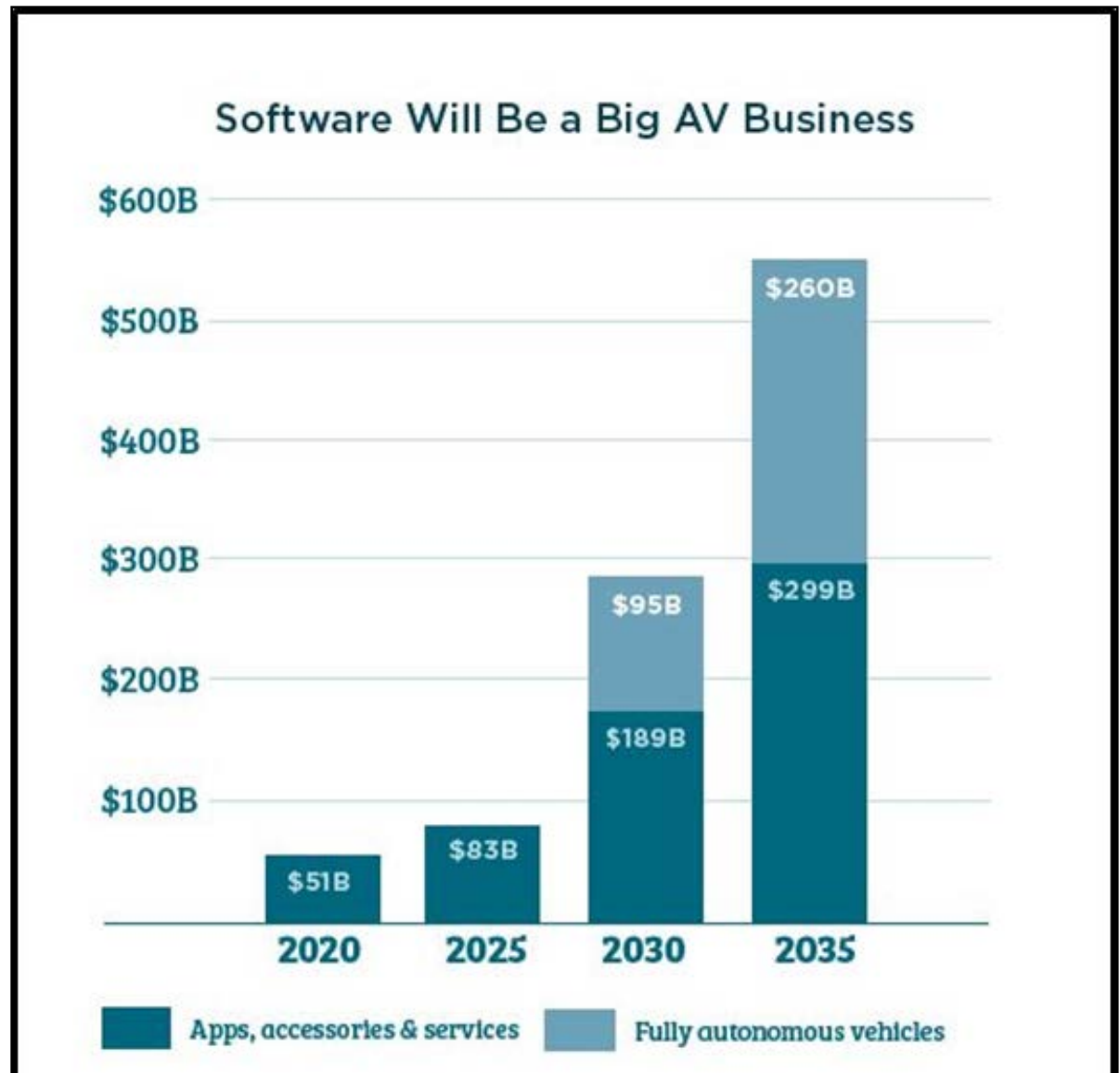
- Create New Mobility Workforce training taskforce - partner with educational institutions and businesses

Future of Workforce

Austin is a software and technology leader

Next Step:

- Create Commercial Opportunities and Economic Development P3 Workgroup



Community Engagement



60% of Austin residents would shift away from driving alone if given better options
(2016 Mobility Talks)

New mobility options, tailored to a community and individual's needs, begins with community engagement with residents and businesses

Next Steps

- Public review of roadmap
www.austintexas.gov/smartmobilityroadmap
- Begin dialogue with stakeholders, community
- Demonstration and partnership agreements
- Start technology pilots
- Seek funding sources, partners
- Initiate policy discussions in concert with Austin Strategic Mobility Plan

